

CLAIMS

~~1. A vulcanizing mold for pneumatic tires, comprising:~~

upper and lower base plates;

upper and lower sidewall mold members for forming tire sidewall
5 portions, said upper and lower sidewall mold members being attached to said
upper and lower base plates, respectively;

upper and lower tread mold members for forming a tire tread portion,
said upper and lower tread mold members being attached to said upper and
lower base plates, respectively;

10 said upper and lower tread mold members being constituted of upper
segments and lower segments, respectively, said upper and lower segments
being displaceable only radially relative to said upper and lower sidewall mold
members, respectively; and

a single cam ring which is adapted to be displaced independently of
15 approaching displacements of said sidewall mold members toward each other,
to thereby simultaneously displace all of said upper and lower segments
radially inwards while said upper and lower segments are in abutment with
each other.

2. The vulcanizing mold according to claim 1, wherein said upper and
20 lower segments are directly or indirectly engaged with said upper and lower
base plates, respectively, such that they are radially displaceable relative to
respective one of said sidewall mold members.

3. The vulcanizing mold according to claim 1, wherein said cam ring
is engageable with both of said upper and lower segments.

25 4. The vulcanizing mold according to claim 1, wherein said upper
segments are always in engagement with said cam ring on radially inner side
thereof.

~~5. The vulcanizing mold according to claim 1, further comprising~~
abutment means for defining the upper limit position of the cam ring has
relative to the upper base plate.

Sub 102
5 6. A vulcanizing method for pneumatic tires with a vulcanizing mold
which comprises: (i) upper and lower base plates; (ii) upper and lower
sidewall mold members attached to said upper and lower base plates,
respectively; and (iii) upper and lower tread mold members attached to said
upper and lower base plates, respectively; (iv) said upper and lower tread mold
members being constituted of upper segments and lower segments,
10 respectively, which can be radially expanded and contracted relative to the
upper and lower sidewall mold members, respectively; said method
comprising the steps of:

displacing said upper and lower sidewall mold members toward each
other so that said upper and lower segments are brought into abutment with
15 each other; and

simultaneously displacing all of said segments radially inwards and
relative to said upper and lower sidewall mold members, with said upper
segments in abutment with said lower segments.

~~7. The vulcanizing method according to claim 6, wherein a single cam~~
20 ring is operated to cause said simultaneous displacement of the segments.